

REMARKS

In accordance with the foregoing, independent claims 1, 5 and 7 have been amended in a common manner to recite "gray scale levels" (in place of "bits for a"), which is submitted to be of the same substantive effect but to afford perhaps a clearer expression of the relationship between the output data and the input video data.

No new matter is presented and, accordingly, approval and entry of the amended claims are respectfully requested.

STATUS OF CLAIMS PRIOR TO THIS RESPONSE

Claims 1-7 are pending.

Claims 1-7 are rejected.

CLAIM CHANGES HEREIN

In accordance with the foregoing, claims 1, 5 and 7 are amended.

ITEM 2: REJECTION OF CLAIMS 1-7 FOR OBVIOUSNESS UNDER 35 USC § 103(a) OVER OTAWARA (JP 11146306A) IN VIEW OF TAJIMA (USP 5,818,419)

By way of background, the Office Action of February 28, 2003, in Item 2 at page 2, rejected all of the pending claims 1-7 for anticipation under 35 USC § 102(e) by Otawara -- the same reference now relied upon in Item 2 of the subject FINAL Office Action in combination with Tajima in rejecting the pending claims 1-7 for obviousness under 35 USC §103. Nevertheless, in the present Action, at page 2, the paragraph discussing Otawara is identical to that set forth in item 2 of the prior Action as grounds of rejection of claim 1.

Likewise by way of background, the independent claims 1 and 7 were amended in the response to the Action of February 28, 2003, to recite in the second paragraph in the body of each of those claims the further condition of:

...wherein a number of bits for a gray scale of the output data is greater than a number of bits for a gray scale of the input video data...

The Action at page 2 expressly concedes that this limitation is not disclosed by Otawara:

Otawara does not teach about a number of bits for a gray scale of the output data is greater than a number of bits for a gray scale of the input video data.

(Action at page 2, last two lines)

The Action then asserts:

However, in the same field of endeavor, Tajima (figs. 16, 17) discloses a display device wherein a number of bits for a gray scale of the output data is greater than a number of bits for a gray scale of the input video data (col. 19, lines 3-13).

(Action at page 3, first paragraph, emphasis added)

ASSESSMENT OF THE TAJIMA PATENT 5,818,419

It is respectfully submitted that the Action errs in the above assessment of Tajima et al. In the following, there is set forth an analysis of portions of the disclosure of the Tajima reference which demonstrate the error of the action regarding the teaching of the Tajima reference -- and even more specifically which show that Tajima generates the opposite relationship of the number of "bits" (now, the number of -- gray scale levels --) of the input video data to the output data, relative to that relationship recited in the independent claims .

As background, note the explanation at col. 9, lines 31-33:

The basic idea of the present invention is the changing as needed of the number of sub frames, depending on the frequency of a supplied vertical synchronization signal.

Further, at col. 11, lines 57-61:

As is described above, once the number of sub-frames is selected, the number of bits to be output from the pseudo-multiple-level gray scale conversion section must be determined in consonance with the selected number of sub frames.

Accordingly, the system includes a "pseudo-multiple-level gray scale conversion section 431..." (col. 12, lines 30-31) which performs "conversion from 8-bit input display data into 5 bits display data (col. 1, lines 43-45):

A case for pseudo-multiple-level gray scale conversion from 8-bit input display data into 5 bits display data will now be explained. If the number of sub-frames is equal to 5 bits, the sub-frame selection signal SEL is (H, L, L). Referring to Table 3 in Fig. 9C, therefore, three lower bits D2, D1 and D0 are supplied as error data Y to the error diffusion arithmetic operation circuit 436....

(Col. 12, lines 43-49; see also, col. 12, lines 50-67)

See further the discussion of "display data conversion section" at col. 13, line 32 through col. 19. Note particularly the paragraph spanning cols. 16 and 17 which refers to converting "an input 8-bit display data signal Din having 256 gray scale levels...into a signal having 44 gray scale levels. The display data DT, obtained after the multiple level gray scale conversion and having 0 to 43 gray scales, are represented by the 6 bit signals DT2 to DT7." (Column 16, lines 60-66; emphasis added).

Thus, the teaching of Tajima is clear, that the number of bits of the output video data is less than the number of bits of the input data.

The paragraph in col. 19 at lines 49-58 then explains that the number of gray scales (0-43) which are represented in "the result obtained by the duplicated subframe conversion, is smaller than the number of gray scale levels (resolutions) (0 -63 gray scales because of 6 bits in the above example), which can be represented by the input data DT." Col. 19, line 50 through col. 20, line 5 further explains that "all the gray scale levels over 43 are changed to gray scale level 43. When all the bits are converted, as in prior art, such a limiting operation must be performed for the conversion tables; however, in the present invention, since only one part of the bits is regarded as a conversion target, the above described limiting circuit is required."

Accordingly, Tajima converts 8 bit input display data into 5 bit output display data which is actually used to drive the display. Accordingly, Tajima's actual teaching is the opposite of that asserted in the Action and, furthermore, the opposite of that recited in the independent claims herein.

LACK OF ANY SHOWING OF PRIMA FACIE OBVIOUSNESS OF THE COMBINATION OF OTAWARA AND TAJIMA

The Action cites only that Tajima is in "the same field of endeavor" as Otawara and otherwise is silent as to any motivation, or even any suggestion, in either of the references to

effect the combination of their respective teachings. The Action merely assumes that the combination would be obvious to implement and would be effective.

Such contentions are rejected by the USPTO as not satisfying the standards of *prima facie* obviousness necessary to support the combination of prior art references. (See, Memorandum of Stephen G. kunin dated February 21, 2002 based on *Dickinson v. Zurko*, 527 U.S. 150, 50 USPQ2d 1930 (1999)).

CONCLUSION

It is respectfully submitted the pending claims distinguish patentably over the art of record and, there being no other objections or rejections, that the application is in condition for allowance, which action is earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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